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# THIRD ANNUAL REPORT

ON THE

# MANAGEMENT AND CONSERVANCY

OF THE

# OUDH FORESTS,

FOR THE FOREST YEAR ENDING SEPTEMBER 30, 1864.

BY

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*Third Annual Report on the Management and Conservancy of the Oudh Forests, for the year* 1863-64.

## General Remarks.

In the Annual Reports for 1861-62 and 1862-63, the operations for those years are reviewed under the four headings:—General Remarks, Survey, Conservancy, and Timber operations; in this Report—

I.—Survey,
II.—Conservancy,
III.—Timber operations,

are treated of first, and separately as far as possible, and have regard only to the actual transactions of the past year, all other matter has been dealt with under the headings as below:—

IV.—Financial results of 1863-64,
V.—Financial results to end of 1863-64,
VI.—Future Conservancy,
VII.—Future Timber operations,
VIII.—Future Income,
IX.—Establishments,
X.—Accounts,
Appendix.

2. I think it as well, before going further, to notice the circumstances attending my being appointed to the charge of the Oudh Forests, and also to show briefly how my time was occupied. The Conservator, Mr. Read, applied for leave on sick certificate in the month of October, and expecting to be soon relieved, only sent the Survey Establishment to commence the survey east of Bhagora Tal, and did not make any arrangements for timber and conservancy operations. I received instructions to join the Forest Department on the 26th January, when I at once proceeded from Meerut to Bareilly, and took over charge from Mr. Read on the 1st of February, on which day I started, *viâ* Lucknow, to inspect the survey parties. I returned at the end of the month to the Sardah Depôt, it was then too late to commence felling operations and to cut creepers, so I endeavoured to make some arrangements for carting timber, to commence work at the bridge-of-boats, and to inspect the south and south-west of the forest between the Sardah and Korially, with a view of determining the boundaries. I had just completed this inspection, when I received instructions to rejoin the survey parties east of Bhagora Tal, for which I started, 10th April. I returned to Lucknow 16th May, made arrangements for landing sleepers at Cawnpoor, and arrived at Nynee Tal, 10th June. I was clearing up the accounts and Office work which had accumulated in my two months' absence from my Office, when, on the 26th August, at the request of the Inspector General of Forests, and with the consent of the Chief Commissioner, I started for Simla to join the Inspector General in his tour to survey the Deodar Forests in Upper Kunowar. I did not arrive at Lucknow till the 26th October, when I prepared the Budget for the financial year 1865-66.

3. From this it will be seen, that only a few days were spent at the Sardah Depôt, the head-quarters of the timber operations. I have given in this Report, and in the Appendix, a great deal of detail which might, at first sight, seem superfluous, but as I have myself lost a great deal of time in ascertaining facts very likely well known to the Conservator, but which have not been recorded, or at least not on any recognized system; and as I am only officiating



501—6, 4, 66.

in the appointment, I do not wish that, on my leaving the Oudh Forests, the Conservator may lose time in finding out, from the want of having them on record, things which I had taken the trouble to ascertain before. It would, I think, be of great use if the Conservator were supplied with copies of all other Forest Reports.

## I.—Survey.

The survey was commenced at Bhagora Tal, east of the Raptee, where the survey of 1862-63 terminated, and was carried on to the Goruckpoor Frontier. Thus the survey of the Oudh Forests is now complete.

2. The boundary line of the forests between the Sardah and Korially, surveyed in 1861-62, has been laid out anew and fixed. The Mohan and Sohélee Rivers form most of the new boundary; on the north-west the limits are well determined by the masonry pillars dividing Oudh from the Nepal Territory; on the south-east from Ghorce Badsha's Fort, near Kyreeghur on the Sohélee, to the village of Ramnuggur on the Korially, a line of temporary earthen mounds (now being replaced by masonry pillars) was made.

3. The area of the forests east of Bhagora Tal, demarcated and surveyed during the year, was 25,2·29 square miles, or 1,61,466·79 acres, of which 141·78 square miles (90,740·52 acres) may be considered as Sâl, and 101·17 square miles (64,752·45 acres) as Dhao,* and miscellaneous forest. A Tabular Statement showing details of tracts will be found in the Appendix (and marked "A").

* Appendix "B."

4. I have drawn a rough map on the same scale as the other Abstract maps, which is herewith forwarded.

5. It will be noticed that, where the hills run north-east and south-west, there is no Sâl, but where they run east and west, the Sâl commences.

6. The Sâl is, in the parts I saw, towards the Goruckpoor Frontier, inferior to that west of the Korially, and a good deal of it has been mutilated when young either for resin† or for poles. In some parts, however, there is some very fine Arseyna‡ growing with the Sâl.

† Raal
‡ Appendix "C."

7. The total cost of survey has been for the year Rs. 3,525-11-9 (see Expenditure, Appendix E), but about Rs. 1,100 more will be required for mapping (2 years), and some unaudited bills.

## II.—Conservancy.

It was too late in the beginning of March to commence making arrangements for cutting the creepers.

2. Strict orders have been issued against cutting saplings of the reserved woods, and the orders have been obeyed by the villagers. They have to use saplings of the inferior woods for their fences and houses; the old villages have Sâl supports and roof-poles in the houses, which will last some time, and hereafter, under proper superintendence, the villagers can cut, with advantage to the forests, Sâl saplings where they are too numerous, or where they would never form straight logs.

3. In my tour of inspection I saw few marks of damage from recent fires.

## III.—Timber Operations.

No trees were felled this year.

2. From para. 2, Conservancy Report for 1862-63, it appears that (840 + 1,160 + 322 + 840) 3,162 trees were felled; and from para 2, Timber operations, of the same Report, that 2,322 logs were brought out of the forest to Depôt,—thus a balance of about* 840 logs were left in the forest; of these 437 have been brought to Depôt, and many more have been taken

* Exact numbers cannot be given, as sometimes one tree will give two logs, and some logs may have turned out hollow and not be worth moving

out of the forests, but cannot be shown in the Progress Statement. The following statement will show the progress made in the carting operations, the amount of timber added to stock, and the value increased:—

| Number. | Description of timber. | | Quantity. | Rate. | Timber added to Stock. | Value added to Stock. |
|---|---|---|---|---|---|---|
| | | | Cubic feet. | Rs. A. | Cubic feet. | Rs. A. P. |
| 637 | Sâl logs ... .. | Forest to Depôt. | 21,123 | 0 8 per c. ft. | 21,123 | 10,561 8 0 |
| 152 | Sâl Sleepers, 1st Class ... | „ „ | 152 | 2 8 „ each. | 152 | 380 0 0 |
| *6,590 | Sâl Sleepers, 1st Class ... .. | Sardah to Kunhout Depôt. | 6,592 | 0 8 „ each. | ... | 3,295 0 0 |
| | Sissoo Planks brought on to Stock ... | | 273 | 2 0 per each. | 273 | 516 0 0 |
| | | | Total value increased ... .. ... | | | 14,782 8 0 |

3. As it would be difficult to place to the debit of the Timber operations apart from Conservancy, the exact share of the expense of Regular and Temporary Establishments,† feed of Elephants and Contingencies, &c., I have not endeavoured to strike a rate, but shall show, under Heading IV, the results of the year. The actual pay of the Temporary Establishment† on timber operations, added to the expenditure, would increase the rate very little, and the regular rates ‡ only have been paid.

4. In page 15 of the Report for 1862-63, it is shown that, at the end of the year, the total assets were Rs. 94,867-7-0, of this Rs. 8,773-15-0 is Cash balance with Contractors, and Rs. 86,093-8-0, Stock. The total value of stock at the end of 1863-64 is shown below, along with the quantity and value of timber taken from stock, and the amount realized by sales. The stock value of timber sold is deducted from the stock in hand at the end of last year, and increase to the value of stock, Rs. 14,782-8-0 (para. 2), is added—

| Taken from Stock. | | Stock value. | Amount realized. | Remarks. |
|---|---|---|---|---|
| | | Rs. A. P. | Rs. A. P. | |
| May.–Sâl wood | 248§ cubic feet. | 124 0 0 | 124 0 0 | |
| „ „ | 5,500 „ | 2,750 0 0 | 2,750 0 0 | |
| „ „ | 18,173 „ | 9,086 8 0 | 22,717 6 0 | |
| „ „ | 6,000 „ | 3,000 0 0 | 3,000 0 0 | |
| August „ | 1,131§ „ | 565 8 0 | 565 8 0 | |
| Total Sâl ... | 31,052 cubic feet. | 15,526 0 0 | 29,156 14 0 | |
| May.–Sleepers | 10′ × 12″ × 6″ 191 | 477 8 0 | 1,000 0 0 | ‖ Mr. Read has value 6,544 Sleepers at Rs. 2-8 each; of these 6,246 are 1st class, 298 are 2nd class (10′ × 10″ × 5″) valued at 8 annas per cubic foot, Rs. 520-2-3, which, if added to the Rs. 477, gives very nearly Rs. 1,000, which I have charged to the Bridge-of-Boats. |
| „ „ | 10′ × 10″ × 5″ 298 | 745 0 0 | | |
| | Total ... | 16,748 8 0 | 30,156 14 0 | |
| | Error ... | 5 0 0 | | |
| | Total ... | 16,753 8 0 | | |

* Formerly valued at Rs. 2-8, now at Rs. 3; eight annas having been added for carting.

† The greater part of the expense of the Temporary Establishment should be charged against Conservancy, sale of wood brought out of the forests by purchasers, sale of other forest produce, and the watching of timber already in stock.

‡ List of rates annexed and marked "D."

§ Sold in January.

‖ The value of these 6,544 at Rs. 2-8 each should be Rs. 16,360, instead of Rs 16,365.

5. Statement showing value of Stock on 30th September 1864 to be Rs. 84,122-8-0 :—

| | | End of 1862-63. | | Deduct Sales. | | Reduced Total. | | Increased. | | End of 1863-64. | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Quantity. | Value. | Quantity. | Value. | Quantity. | Value. | Quantity. | Value. | Quantity. | Value. | |
| | Rs. A. P. | | Rs. A. P. | | Rs. A. P. | | Rs. A. P. | | Rs. A. P. | | Rs. A. P. | |
| Cubic feet ... | Sâlwood 0 8 0 | 104,872 | 52,436 0 0 | 31,052 | 15,526 0 0 | 73,820 | 36,910 0 0 | 21,123 | 10,561 8 0 | 94,943 | 47,471 8 0 | Cubic feet Sâlwood. |
| 1st Class ... | Sleepers 2 8 0 | 13,163 | 32,907 8 0 | 191 | 477 8 0 | 12,972 | 32,430 0 0 | 152 | 380 0 0<br>3,295 0 0 | 13,124 | 36,105 0 0 | 1st class Sleepers. |
| 2nd „ ... | „ 2 8 0 | 298 | 745 0 0 | 298 | 745 0 0 | | | | | | | |
| Error ... | ..... | ..... | 5 0 0 | ..... | 5 0 0 | ..... | ... ..... | 273 | 546 0 0 | 273 | 546 0 0 | Sissoo planks. |
| Total ... | ..... | ..... | 86,093 8 0 | ..... | 16,753 8 0 | .. ... | 69,340 0 0 | ..... | 14,782 8 0 | ..... | 84,122 8 0 | Total value of Stock, 30th September 1864. |
| | | | Report, 1862-63. | | (Para. 4.) | | | | (Para. 2.) | | | |

| | Rs. | A. | P. |
|---|---|---|---|
| Total assets ... | 94,867 | 7 | 0 |
| Cash Balance with Contractors ... | 8,773 | 15 | 0 |
| | 86,093 | 8 | 0 |

## IV.—Financial Results of 1863-64.

1. Below is a Statement showing the financial results of the Forest year, 1863-64, in the form prescribed by Government:—

### OUDH FOREST DEPARTMENT.

*Financial Results of the Forest year,* 1863-64, *ending* 30*th September* 1864.

| 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | |
|---|---|---|---|---|---|---|---|---|---|---|
| Forests. | Receipts from sale of timber of all kinds. | Receipts from Minor Forest produce, including grazing dues. | Total Receipts. | Disbursement on account of working expenses. | Balance in favour of Government. | Cost of permanent Establishment, Contingencies, and Survey, not included in Column 5. | Actual Profits. | Excess of Expenditure over Total Receipts. | Value of timber of all kinds at average per cubic foot of sale. | Remarks. |
| | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | | Rs. A. P. | |
| 1863-64 ... | 33,005 0 10 | 27,592 0 0 | 60,597 0 10 | 18,114 5 1 | 42,482 11 9 | 20,688 10 3 | 21,794 1 6 | ..... | 84,122 8 0 | |

| | E Receipts Rs. A. P. | Page 25. Rs. A. P. | See Remarks E. | See Remarks E. | Rs. A. P. | |
|---|---|---|---|---|---|---|
| | | | | Value of Stock ... | 84,122 8 0 | |
| Page 23. I | 30,156 14 0 | V. 23,447 0 0 | | Cash balance with Contractors | 357 6 3 | |
| „ 25. II | 2,848 2 10 | VI. 4,145 0 0 | | | 84,479 14 3 | Assets for the year. |
| | 33,005 0 10 | 27,592 0 0 | | Due by Contractors, 1862-63... | 8,773 15 0 | |
| | | | | | 93,253 13 3 | Total Assets. |

## V.—Financial results up to the end of 1863-64.

1. The financial results of the three years since the forests have been in the charge of this Department, are given below in the same form as the financial results of 1863-64, an extra column, 6 A, having had to be added—

# OUDH FOREST DEPARTMENT.

## Financial Results for the Forest years, 1861-62, 1862-63, and 1863-64.

*Separately and together.*

| 1. | 2. | 3. | 4. | 5. | 6. | 6 A. | 7. | 8. | 9. | 10. | 11. |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Forest. | Receipts from sale of timber of all kinds. | Receipts from Minor Forest produce including grazing dues. | Total Receipts. | Disbursements on account of working expenses. | Balance in favour of Government. | Balance against Government. | Cost of permanent Establishment not included in Column 5. | Actual profits | Excess of expenditure over Total Receipts. | Value of timber on hand at average per cubic foot of sale. | Remarks. |
| | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P | Rs. A. P. | |
| 1861-62 .. | . . . | 4,033 0 0 | 4,033 0 0 | 22,250 4 2 | | 18,217 4 2 | 15,880 12 1 | ... .. | 34,098 0 3 | 16,365 0 0 | Page 15, Report 1862-63. |
| 1862-63 .. | 43,559 14 0 | 15,735 4 1 | 59,295 2 1 | 41,125 7 0 | 18,169 11 1 | ..... | 17,686 9 8 | 483 1 5 | ... . | 86,093 8 0 | Assets Rs. 94,867-7-0. |
| * Since realized on account of 1861-62 and 1862-63 .. | 6,978 7 8 | 24,669 11 11 | 31,648 3 7 | | | | | | | | |
| End of 1862-63 | 50,538 5 8 | 44,438 0 0 | 94,976 5 8 | 63,375 11 2 | 13,600 10 6 | ..... | 33,567 5 9 | . ... | 1,966 11 3 | 86,093 8 0 | Assets Rs. 94,867-7-0. |
| 1863-64 | 33,005 0 10 | 27,592 0 0 | 60,597 0 10 | 18,114 5 1 | 42,482 11 9 | . .. | 20,688 10 3 | 21,794 1 6 | .. | 84,122 8 0 | Assets Rs. 93,254-7-3. |
| End of 1863-64 | †83,543 6 6 | ‡72,030 0 0 | 1,55,573 6 6 | 81,490 0 3 | 74,083 6 3 | ... | 54,256 0 0 | 19,827 6 3 | ... | 84,122 8 0 | Assets Rs. 93,254-7-3. |

* See para. 2, page 30.

| | | Rs. A. P. | |
|---|---|---|---|
| † Receipt I. 1862-63 | ... ... | 38,167 14 0 | |
| " " 1863-64 | ... ... | 30,156 14 0 | |
| II, for the 3 years | .. | 15,218 10 6 | See page 25. |
| | | 83,543 6 6 | |
| ‡ V, for 3 years | ... | 58,796 0 0 | See page 25. |
| VI, for 3 years | ... | 13,234 0 0 | |
| | | 72,030 0 0 | |

| Abstract of the three years. | Rs. A. P. |
|---|---|
| Total Receipts ... ... | 1,55,573 6 6 |
| Total Expenditure .. ... | 1,35,746 0 3 |
| Actual Profits ... ... ... | 19,827 6 3 |
| Assets ... ... ... ... | 93,254 7 3 |
| Balance in favour of the Department ... . ... | 1,13,081 13 6 |

2. Of the balance, Rs. 19,827-6-3 are actual profits when the grazing dues to the amount of Rs. 58,796-0-0 are credited to the Department.

Of the assets—

| | Rs. | A. | P. | |
|---|---|---|---|---|
| | 84,122 | 8 | 0 | are value of stock, |
| and | 9,131 | 15 | 3 | cash balance with Contractors. |
| Total ... | 93,254 | 7 | 3 | |

3. Some of the cash balance in the hands of Contractors may not be realized, but such contingency is more than covered by the certainty of the stock realizing more than Rs. 84,122-8-0. From the figures given in the Tabular Statement, it will be seen that, during the three years that the forests have been in charge of this Department, the sum of Rs. 1,35,746-0-3 has been expended, of this Rs. 15,895-0-7 have been spent on survey* and bridge-of-boats which cannot be deemed current expenses.

| | Rs. | A. | P. |
|---|---|---|---|
| * Survey .. | 9,688 | 2 | 7 |
| Bridge-of-boats | 6,206 | 14 | 0 |
| | 15,895 | 0 | 7 |

4. Though a large part of the revenue has been obtained from sources other than the sale of timber brought to Depôt by Government agency, it will be seen from the following figures that although only 816 Sissoo, and 6,127† Sâl trees have been felled, the prices realized for part, and the value of the remainder, more than pay for all expenses :—

† About.

| | Rs. | A. | P. |
|---|---|---|---|
| Receipts from Timber of all kinds ... ... ... ... | 83,543 | 6 | 6 |
| Deduct receipts for timber taken out of forest by purchasers ... | 15,218 | 10 | 6 |
| Total receipts for felled Timber . ... . ... | 68,324 | 12 | 0 |
| Value of Timber in stock ... | 84,122 | 8 | 0 |
| Total ... | 1,52,447 | 4 | 0 |

Value of felled Timber.

| | Rs. | A. | P. |
|---|---|---|---|
| Expenditure for 3 years .. | 1,35,746 | 0 | 3 |
| Value over expenditure . | 16,701 | 3 | 9 |
| Total ... | 1,52,447 | 4 | 0 |

5. Though the Sissoo trees were not felled by this Department, they have been counted as felled trees being of the reserved woods. The price obtained from them was only Rs. 3,384, leaving the value of the Sâl trees to cover all expenses.

## VI.—Future Conservancy.

1. I would recommend that Mr. Read's plan of dividing the Oudh Forests into three Divisions be adopted, with a little alteration in the bounds of the 2nd and 3rd Divisions : I would call—

The 1st, the Kyreegurh Division.
,, 2nd, the Baraitch ,,
,, 3rd, the Gonda ,,

The first would include the forests from the Sardah to the Korially; the second from the Korially to the Baraitch and Gonda boundary; and the third from the Baraitch and Gonda boundary to the AraNullah, the eastern limit of the Gonda District. This would be more convenient than having Bhagora Tal as the east and west boundary of the second and third Divisions. All remittances of revenue would be made from each Division through its respective Treasury, tending to simplify accounts and general working.

2. At present the reserved woods are four in number, *viz.*, Sâl, Sissoo, Toon, and Ebony. Of these, Toon and Ebony do not abound in the forests, so

that we may consider at present that Sâl and Sissoo are the trees we are to rely on mainly for our revenue. I have, in Appendix (Notes B and C) given information regarding Dhao (Conocarpus latifolius) and Arseyna (Terminalia Tomentosa), showing that they are valuable woods, and I recommend that they should be included in the reserved woods. At present the Arseyna saplings are cut for the fences and houses of villagers, and large fine timber trees are destroyed solely for their bark, which is used for tanning or dyeing; and young Dhao are cut for axle trees, roofing poles, and other purposes, and many are destroyed by the herdsmen who lop off the branches for fodder for their cattle. If these two woods are to be included in the reserved woods, orders will be issued for the discontinuance of these practices. The villagers can be allowed to cut saplings under supervision.

3. Both Dr. Brandis and Mr. Read consider that, in order really to conserve and improve the forests, and work them efficiently, more work will have to be done in them than is done at present.

To improve the forests, and to work them efficiently, we must make our establishment more efficient, and economise the timber that we cut.

The capabilities of the forests will only be known when a large number of forest surveys have been made, and when the growth of trees has been ascertained from careful observations of the stumps of felled trees in different localities and soils.

4. The forests have to be protected from villagers, who, in their ignorance, destroy valuable timber when their wants could be provided for without such destruction; from persons who take timber without payment; from fires on the high dry grounds; from the creepers in the richer and moister soils; and where from the absence of men, and fires, and creepers, the trees have grown too numerous, some of them must be removed in order to give the others room to develop themselves.

5. The Forest Establishment consists of a Conservator with his Office Establishment, and the Forest Establishment consisting of three Jemadars and 15 Chuprassies. The Forest Establishment, however, is assisted by two Darogahs and two Chuprassies, who are paid in the temporary Establishment.

6. The Chief Commissioner has recommended that an Assistant be appointed, as he is well aware of the impossibility of the Conservator attending to the operations connected with the felling, carting, and sale of the timber, and the valuation surveys and inspection of the entire tract of the forests. As yet no Assistant has been appointed, and I would urge the Chief Commissioner to again apply to Government for the services of an Officer to help the Conservator, as I consider that, without such assistance, the forests cannot have that supervision which is so necessary, and which will contribute to their improvement and to their being more efficiently worked.

7. When the present Forest Establishment (then the Preventive) was formed, it was no doubt intended to prevent persons taking away timber without paying the Government duty, as the stations were at the Sardah Ghâts on the road to Phillibheet, at Kyree Ghât, at the junction of the Sardah and Gogra, and at Mutureea Ghât where the Raptee commences to form the boundary between Oudh and the North Western Province of Goruckpoor. I have with this Report forwarded abstract maps of the Oudh Forests, and on them shown the positions of the Ghâts.

8. The Chief Commissioner will see that, with the present arrangements, it can hardly be expected that the forests can have that supervision they require, a certain number of Chuprassies having to remain at the Ghâts.

I have withdrawn the Kyreegurh Forest Establishment from the Sardah Ghâts and have employed it in the Kyreegurh Division. The establishment at the bridge-of-boats will do the work formerly done by it. At Kyree and Mutureea Ghâts, I think it would be as well, at present, to leave a Jemadar

and three Chuprassies. I propose the following Establishment (for Tabular Statement, see IX. Establishment) :—

| | | |
|---|---|---|
| *Kyreegurh Division* ... | 1 Jemadar ... | Forests. |
| | 5 Forest Watchers ... | |
| | 2 Chuprassies ... | |
| *Baraitch Division* ... | 1 Darogah ... | Forests. |
| | 6 Forest Watchers ... | |
| | 2 Chuprassies ... | |
| | 1 Jemadar ... | Ghâts. |
| | 3 Chuprassies ... | |
| *Gonda Division* ... | 1 Darogah ... | Forests. |
| | 6 Forest Watchers ... | |
| | 2 Chuprassies ... | |
| | 1 Jemadar ... | Ghâts. |
| | 3 Chuprassies ... | |

9. I have marked on the maps the different proposed Sub-Divisions. The Forest Watchers would have to live in one of the villages within their Sub-Divisions. The cost of the proposed Establishment would be Rs. 244, being an increase of Rs. 78 in the cost of present Establishment (Rs. 106 + Rs. 60). The Chief Commissioner having approved of the increase proposed by Dr. Brandis for the Kyreegurh Division, it will be carried out as soon as possible; and I hope that an Establishment, which is so necessary, and which is formed on the same plan as that of the Kyreegurh Division, will be sanctioned by him for the other two Divisions. As those Divisions cannot, for some time, have the same supervision as the Kyreegurh has, it will be necessary to have men on good pay, and I do not think Rs. 30 a month too much for men who have the work and responsibility of Forest Darogahs. I think Rs. 7 a month will be sufficient for the Forest Watchers, being the pay of a Chuprassie at Rs. 5 a month, and two-fifths* of his pay as forest allowance or batta. The Chuprasies at the Ghâts could be promoted to fill up vacancies in the ranks of the Forest Watchers.

* The new sanctioned rates.

10. The economising of cut timber will be treated of under the head of Future Timber Operations.

11. Both the Baraitch and Gonda Divisions want rest, but I dare say there are many places where timber may be removed with advantage to the forests and to the revenue.

12. With regard to burning the grass; I think this might be allowed in the Tapurs outside the forests up to the middle or end of February. This would allow the villagers a certain amount of fresh pasturage for their cattle, and as the grass in the forests is then, from being protected from the sun, not liable to catch fire when the hot winds have set in, there will not be the same danger of the forests taking fire from without.

13. *Creepers.*—Though it is hoped that within a couple of years the large creepers, which are choking our valuable trees, will be destroyed, we shall have yearly to destroy the young creepers among the saplings, for it is the young trees they cling to, growing up with them, and then destroying them. In the absence of jungle fires, the young creepers will be more numerous than they are now.

14. In giving out the contracts for grazing and miscellaneous forest produce in future years, the Contractors should be bound down not only against firing, but the lopping the branches, and barking of certain kinds of trees.

If the Government Forests Bill, now before a Select Committee, be passed into law, and the Establishment increased as recommended, the Conservancy Rules will, I hope, be able to be strictly enforced.

15. *Thinning operations* require the strictest supervision, and cannot be commenced at present on any large scale. I have had a few trees cut for piles

for a bridge at Fyzabad. Trees of about 40 inches in girth do well for this purpose, and there are many of such size that should be removed.

## VII.—Future Timber Operations.

*Selection.*—The trees to be felled are to be over 6 feet girth at 6 feet from the ground. This rule is easy enough to follow. The difficulty is to select a sound and good tree, and requires a great deal of experience. If the stem is not smooth, but has quantities of small rudimentary branches protruding, the wood will probably be unsound and knotty. If a tree of a moderate size has a main branch withered, it will be generally found that the tree is unsound, and is decaying before it has arrived at maturity. If the bark has a rough scabby appearance, it will hardly be necessary to sound the tree with the back of the koolharee, for it is almost certain to be hollow. But there are many trees that have not arrived at either of these two latter stages, and though their bark looks well, though all their branches are right, and though, when struck with the koolharee, they sound solid, yet are shown to be unsound when nearly half cut through. The tree is damaged for ever; under our present system of working it is left to remain, it would not be worth while the expense of felling, barking, dividing into logs, and carriage to depôt; the chances are that not half the wood would be of any use as timber.

2. *Felling.*—The order is to fell the tree as near the ground as possible. Large trees cannot be so easily felled low as smaller trees, as it is very fatiguing to the axe-men. Trees under 70 inches girth at six feet from the ground should be felled within 2½ feet from the ground, and over that girth three feet may be allowed. The tree is allowed to fall which way it likes, generally the side the heavier branches are on, and does much damage in its fall, and I think it would, in a great many cases, be better to have the branches sawn off first. It would be a little more expensive and more difficult to accomplish, but many a fine young tree would be saved.

3. *Barking.*—Is a simple process, and needs no remarks.

4. *Dividing.*—I would recommend that saws be introduced, if a log be divided where the girth is 64 inches, there is a loss of a cubic foot and a half, or two cubic feet of timber when the axe is used, as a good deal of wood has to be chipped out to allow room for the stroke, and a tree may be considered fairly divided when there is only a section of 9 inches or a foot thus wasted; in a large tree it would be much more. In an out-turn of 4,000 trees the waste would be fully 16,000 cubic feet of good timber, or a loss to Government of Rs. 4,000. This is putting the value of the wood at eight annas, allowing four annas for operations, and four annas for the timber. For every cubic foot wasted in a log that would be sold to the Gun Carriage Agency, the loss would be one Rupee.

5. The trunk should be used up to the first branch. Up to the present only logs over 20 feet have been taken out of the forests. Logs of 10 feet, and even under that, would be as useful for many purposes: they would not do for beams or long scantlings, but for planks, carts, short rafters,* &c., would answer as well as 20 feet logs. A good deal of this wood was formerly used up in sleepers, and some scantlings were cut of the timber felled in 1861-62. Short logs might not fetch the same price at the Depôt as long ones, but the gain would be the same to Government, as the carriage of them would be also less.

* Burgahs.

6. *Sawing.*—I would recommend that unsound trees, which would not bear the expense of carting to the Depôt, should be sawn up in the forests. In the Kumaon Forest a large number of scantlings are cut, and they seem to fetch a ready sale. I annex a Note † of the scantlings cut in the Kumaon Forests, and rates taken from Colonel Ramsay's Report for 1860-61. The main branches of trees, where not straight, might be sawn into half-wroughts for wheels, which would be bought by the people in the vicinity of the forests.

† Appendix "J"

7. I have already expressed, in letter No. 167, my opinion on the subject of saw machinery.

8. *Carting.*—This is at present a difficulty, the number of carts, capable of carrying large logs, is limited, and our dealings are with a number of small contractors, who can always get work from the merchants, who bring timber from Nepaul; they take advances readily, but it is very difficult to get them to work up to the amount they receive. It would be an immense advantage if we could get a few men of substance to take up large contracts, and give security for the advances made to them. It would be worth while paying a small extra percentage on our present rates. I have annexed a list of these rates, from which it will be seen that an average log, say 70 inches girth, costs two annas ten pie per cubic foot, and a sleeper of 5 cubic feet eight annas, or one anna seven pie per cubic foot, the ratio being as 177 is to 100.

9. *Sales.*—As yet we may say that we have had no public sale, but I have advertised that a sale is to take place on the 2nd of March next. I have made it as well known as I possibly could, having inserted the advertisement in the principal English and Native Papers in the North Western Provinces and Oudh, in the Government Gazettes; in stations where newspapers are not published, I have forwarded notices to the principal Civil Officers with a request that they will let it be known in their districts. I have also intimated that the timber will be sold in large and small quantities, so that purchasers may suit their requirements; and for public officers and others who might not be able to attend the sale, I have stated that all tenders for quantities over 1,000 cubic feet for cash payment will be accepted up to date of sale. The whole of the scantlings that were cut in 1861-62 were sold to one purchaser, as were the logs and thinnings (undersized logs) and scantlings of various sizes would fetch a ready sale. Large quantities of Arseyna kurries were taken out of the Kyreegurh Forest last year by merchants, who paid a certain duty to the Contractor of grazing and miscellaneous forest produce.

10. *Sâl Scantlings.*—I would recommend that a good deal of the timber be brought out in scantlings for the following reasons:—

1st.—Much valuable timber would be saved.

2nd.—Such timber can be carried by the common carts of the country, whereas heavy logs require peculiarly constructed carts.

3rd.—The rate of carriage is 77 per cent. cheaper than that for logs. The difference of rates, *viz.*, one anna three pie per cubic foot, would cover the cost of sawing, so that we could afford to sell sawn timber at the same price as timber in the log.

4th.—I believe that any number of scantlings we liked to throw into the market would be eagerly bought up, as they could be carried with ease to all the towns in the North-West. The Ganges market could be supplied cheaply as they can be floated down the Kunhout in the dry season, whereas logs cannot. The present prices of kurries at Cawnpoor is Rs. 2-4 per cubic foot. The carriage from the Sarda Depôt to Cawnpoor for our sleepers is less than four annas a cubic foot; merchants could land kurries there for 12 annas a cubic foot, including all charges, exactly one-third of the price they are now fetching; Lucknow and other towns on the Goomtee might be supplied at nearly, if not at, the same rate, for they could be rafted down in the rains, whereas logs to be rafted down that river would have to be carried a considerable distance by land before water enough could be found to float them.

11. *Compartments.*—Up to the present, 6,127 trees have been felled; these have been taken from the tract (No. 32) Gwaree Ghât, (No. 30) Newalkhar, (No. 31) Ramghur, and Chandpoor (No. 37). Mr. Read estimates that 10,000 first class trees still remain in Gwaree Ghât. I propose taking 4,000 trees from this tract this year, and next year the operations might take place

in the same tract if there be found trees enough; so that, afterwards, the work may be carried on in the Ramghur and Chandpoor tract, after which they will be closed till the whole of the remaining tracts have been worked.

12. *Depôts.*—Before I received Mr. Read's Report, I thought that the felling would take place in the Newra tract (No. 40), having heard that trees had been cut on both sides, the Newalkhar and Chundea Road, and I had not seen the Sohelee River after so dry a season as the present has been, and I recommended the establishment of a Depôt in the vicinity of Pulea. This idea must be given up, and the Depôt formed on the korially as first proposed by the Chief Commissioner. The timber will be brought out of the forests near Newalkhar on the banks of the Sohelee, and can be sent either to Koolkhan Ghât by land carriage, or during the rains to the Korially Depôt. I propose selecting the best timber at Newalkhar, and sending it to Koolkhan Ghât, as there will be a certain demand by the Futtehgurh Agency for such timber, and the price of selected timber is Re. 1-4 per cubic foot.

The depôt at the Korially will be so situated, that timber sent down the Mohan will not have to be sent out of its way. I propose sending a few logs cut in the north-west of Gwaree tract, by this route to open out the communication.

13. *Communications.*—The Sohelee will be cleared of snags during the dry weather, for there has not been any navigation on it for a considerable time, and the boats carrying the timber in the rains would be liable to be swamped if they were allowed to remain.

I have bridged one of the principal nullahs on the road from Keerutpoor to Koolkhan Ghât, and am making arrangements to bridge others. It will be seen from abstract Map No. 1 that the forest roads converge towards Newalkhar, and the line from Newalkhar to Chundea will be the route for all timber going to Koolkhan Ghât; I expect the track will have to go round by Kubeergunge to avoid a large extent of sandy soil that lies in a straight line between Sumeerpoor and Chundea.

14. I have not yet seen the forests in the Baraitch Division, and shall not be able for some time to do so, I am therefore unable to say where the boundary pillars should be placed; when I can get away from the timber operations, I propose visiting it, and will have temporary "matams" made, and will report for the Chief Commissioner's information.

## VIII.—Future Income.

Mr. Read has calculated on an annual profit of Rs. 97,500 per annum, against which surplus must be charged the cost of Establishment, making roads, &c. Though I have no doubt about the forests eventually yielding more than Rs. 1,00,000 clear profit per annum, till the 2nd and 3rd Divisions are better known, it is only safe to reckon on a surplus of Rs. 40,000 per annum free of all charges, as the figures below will show—

| | Rs. |
|---|---|
| Charges for improving the forests ... ... | 8,000 |
| Charges under head "B" Establishments, &c. ... | 22,000 |
| | 30,000 |
| Actual profit on 4,000 trees at 45 cubic feet and at four annas per cubic foot ... ... | 45,000 |
| Actual profit on grazing dues and miscellaneous Forest produce ... ... ... ... | 25,000 |
| Total ... ... ... | 70,000 |
| Deduct expenses ... ... | 30,000 |
| Clear profit ... ... ... | 40,000 |

This will be obtained by only working one-third of the forests.

2. From the sale of timber, fire-wood, &c., removed by purchasers, a considerable sum may be obtained; Huldoo or Tikooee *(Nauclea Cordifolia)* and Arseyna logs are in great demand where Sâl is scarce, and I have raised the price of logs from four annas to Rs. 4 for Arseyna, and Rs. 2 for Huldoo, which is less than two annas and one anna per cubic foot. Beams also of Koosoomb *(Schliechera trijuga)* are required for oil and sugar mills. When Sâl was to be got for paying Rs. 4 a log, of course the people near the forests would not think of using such woods as Arseyna or Huldoo, designating them "kutcha," though such woods are eagerly sought for at places distant from the forests: the price of the so-called "kutcha" woods might be increased when we want a sale for our Sâl timber, and lowered if the demand for Sâl exceeded the supply, or the woods would fetch their proper price. Old fallen Sâl trees and hollow Sâl trees for native boats are valuable, and I propose selling the right to collect these by public auction. When the forest watchers are appointed, they will see that only such timber as is named in the contract is taken from the forests.

3. *Grazing dues.*—Now that firing the jungles is forbidden, and the lopping of branches most probably will be, it would at first sight appear that our revenue from grazing dues would be greatly lowered; I think it will gradually rise, and am partly supported in this opinion by the fact that, whereas, the grazing and miscellaneous forest dues of the Kyreegurh Forests were let in 1862-63, to the Rajah Randoo Sahai, for Rs. 6,050; when there was no order against firing, in 1864-65, they were let to the same Rajah for Rs. 10,500, on the distinct understanding that the jungles were not to be set fire to. From the Statement (Note F) of the Deputy Commissioner of Baraitch, it will be seen that the grazing dues for 1861-62 let for Rs. 9,330; for 1862-63, Rs. 11,905; for 1863-64, Rs. 15,890. The grazing dues in Gonda show no rise as they were let for a certain period to the Rajah of Bulrampoor. The price for grazing cattle in the Kyreeghur contract is limited to Rs. 12-8-0 per 100, or two annas a head for the year; as a bullock would, in an Agricultural District, cost nearly that for bhoosa or straw in one day, I think the rates might be easily increased 50 or 100 per cent. without any hardship on the herdsmen. Prices will, of course, have to be kept down to a certain extent, as the Nepaulese have large grazing grounds to which the people would take their cattle if the rates were excessive; but as the waste lands of Oudh come under the plough, I have no doubt the Nepaulese will raise their prices for grazing (as they have done for their timber) when they see that there is a demand.

4. When the boundaries of the 2nd Division have been fixed, the exact amount for which the grazing and miscellaneous forest dues are let can be credited to this Department; for the present year, the Deputy Commissioner informs me that the Chief Commissioner has ruled one-half of the grazing dues of the Baraitch Division is to be credited to this Department.

5. There are many things for which at present we make no charges in minor Forest produce (Receipts sub-head VI); our present contracts are for wax, honey, peepul, kutha, mowah, lac, bunkus and julkur. I forward a list of forest produce of the Kumaon Forest, and the prices allowed to be taken by the contractor; such produce is to be found in the Oudh Forests.

Note H. Appendix.

6. *Waif and Stray.*—As there will be a smaller Establishment on the Ghâts, I think that the right to collect drift wood, &c., might be sold by public auction in the Districts through which the Sardah, Gogra, and Raptee flow. I fancy there is a considerable quantity of Sissoo and other timber yearly washed away from the forests which gets stranded on the rivers' banks.

## IX.—Establishment.

1. Below will be found the present sanctioned Establishment, and that which is recommended for sanction :—

| Grade. | Salary. | Total. | Total of each Class. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| 1 Conservator .. ... ... ... ... | 700 | 700 | 700 |
| 2 { Office Establishment with Conservator ... | 212 | 212 | |
| { Clerk in Dy. Audr. and Examr's Office ... | 100* | 100 | 312 |
| Forest Establishment. | | | |
| *Sarda Ghât.* | | | |
| 1 Jemadar ... ... .. . ... | 10 | 10 | |
| 6 Chuprassies .. . ... ... ... | 5 | 30 | |
| *Muturea Ghât.* | | | |
| 1 Jemadar ... ... ... ... ... | 10 | 10 | |
| 6 Chuprassies . ... ... ... ... | 5 | 30 | |
| *Kyree Ghât.* | | | |
| 1 Duffadur ... ... ... ... .. | 8 | 8 | |
| 3 Chuprassies ... ... ... ... ... | 6 | 18 | 106 |
| Total Permanent Establishment ... | ... | ... | 1,118 |
| *Cost of Temporary Establishment.* | | | |
| 1 Darogah ... ... ... Rs. 30 0 0 | | | |
| 1 Ditto ... ... ... ,, 20 0 0 | | | |
| 2 Chuprassies, at Rs. 5 ,, 10 0 0 | ... | | 60 |
| Total ... | ... | | 1,178 |

### Proposed Establishment.

| Grade. | Salary. | Total. | Total of each Class. |
|---|---|---|---|
| | Rs. | Rs. | Rs. |
| 1 { Conservator } Assistant Conservator } .. ... ... | 700 | 700 | 700 |
| 2 { Office Establishment with Conservator ... | 212 | | |
| { Clerk in Dy. Audr. and Examr.'s Office ... | 100 | 312 | 312 |
| *Forest Establishment.* | | | |
| 2 Darogahs† ... ... ... ... ... | 30 | 60 | |
| 1 Jemadar ... ... . ... ... | 15 | 15 | |
| 2 Jemadars ... ... ... ... | 10 | 20 | |
| 17 Forest Watchers ... .. ... ... | 7 | 119 | |
| 6 Chuprassies ... ... ... . | 5 | 30 | |
| | | | 244 |
| Add pay of Assistant ... ... | ... | ... | 1,256 |
| Total ... | | | |
| Pay of Proposed Establishment ... | | | |

* Only Rs. 60 of this is drawn.

† See Note

Rs. 1,256 Proposed Establishment.

,, 1,178 Present cost of Establishment.

78 Increase,

but Rs. 138 Increase on sanctioned Permanent Establishment.

NOTE.—As it is desirable that Subordinates in the Forest Departm should be regularly classified, the Inspector General of Forests might be consulted about the naming of these Officials.

## X.—ACCOUNTS.

*Receipts.*—The arrangements for the sale of miscellaneous forest produce being now in the hands of the Conservator, I have had warrants printed, without which no money will be realized; a copy of such warrant is annexed;* a duplicate will remain in this Office, and thus it can always be found for what a certain sum was realized, how much has been realized, and how much is due; also it can be determined exactly under what sub-heading of the Budget the sum is to be credited, and thus we shall obtain some data for anticipating our future income from such sources.

*Appendix K.

2. I would recommend that Deputy Commissioners should send a monthly statement of receipts for sale of timber and forest produce to the Deputy Controller and Examiner of Accounts, Lucknow, and that the Forest Clerk in his Office should compile from these accounts a statement of receipts (new monthly Form No. 8), one copy of which could be forwarded to the Deputy Auditor and Accountant General, Allahabad, one to the Secretary to the Chief Commissioner, Public Works Department, and another to this Office. This plan, if adopted, would, I think, do away with the confusion in the accounts which has hitherto prevailed, the sums in the books of the Deputy Auditor and Accountant General not agreeing with those of the Conservator.

3. I find, on reference to para. 8 of letter named in the margin, that such a plan coincides with the views of the Chief Commissioner. When in Lucknow, in November last, I could not obtain a statement of receipts from the Office of the Deputy Controller and Examiner. I believe the Deputy Commissioners forward their statements of receipts to the Deputy Auditor and Accountant General, North Western Provinces (see para. 13 of same letter).

No. 1053, dated 4th September 1863, from Lieutenant-Colonel J. E. T. Nicolls, Officiating Secretary to Chief Commissioner, Oudh, Public Works Department, to Secretary to Government of India, Public Works Department, with G. G.

4. The new system of accounts has been in force from the 1st May 1864, and the following monthly accounts are now sent to the Deputy Controller and Examiner, Department Public Works Account, Lucknow:—

1st.—Establishment Bill ... ...
2nd.—Travelling Allowance Bill ... } for audit.
3rd.—Contingent Bill ... ... ...

4th.—Cash Account showing money received, and details of case expended.

5th.—A Progress Report in which sales of timber and work realized are notified.

6th.—A statement of receipts from Treasuries from sale of timber and Forest produce.

5. This latter would not be necessary if the plan recommended in para. 2 be adopted. From Accounts Nos. 4 and 5, the many different accounts now required by the new system can be compiled by the Clerk in the Office of the Deputy Controller and Examiner, Department of Public Works, Lucknow.

6. The following are sent to the Deputy Auditor and Accountant General, North Western Provinces:—

| | |
|---|---|
| Cash Balance ... ... ... ... ... | Monthly. |
| Application for Letter of Credit ... ... | Quarterly. |

E. WOOD, *Captain,*
*Offg. Conservator of Oudh Forests.*

.y furrowed, as to prevent it yielding a good plank. In the inland Deccan Hills it has a stunted gnarled form. Dr. Gibson also says, that in the Bombay Forests, it varies in size from a scrubby shrub to a great tree, according to soil and situation, and it seems to be as common in the inland forests as it is in those of the coast. The wood is well described by Dr. Wight as very strong. It is also very tough, and hence is much in use for the wooden axles of carts. It is much used in agriculture and house-building. This also is one of the trees which should be largely increased. Its timber is universally esteemed for almost every economical purpose. House-building, shafts, and yokes, and general use for Railway purposes, but makes very good cabinet furniture. Towards the centre it is of a chocolate colour, and is exceedingly durable. For house and ship-building the natives reckon it superior to every other sort; *Pentaptera Tementosa** and Teak excepted. Captain Sankey writing from Nagpoor, says, it is a white wood with a heart of a dark colour and somewhat like Rosewood. Its average length there is 12 feet and girth 7 feet. It is so much prized by the Natives of Nagpoor for axle-trees, that but few trees are permitted to attain their proper growth. By all accounts, in Nagpoor about 20,000 axle-trees are made from this wood yearly. It is attacked by white-ants. Though not obtainable in very large quantities, it ranks high as a rafter timber.—Drs. Roxburgh, Gibson and Wight, Mr. Rohde, Captain Sankey, Voight."

* Arseyna.

Extract from "*Cleghorn's Forest and Gardens of South India,*" page 250.—"The wood is heavy, light coloured, and close grained. The tree is tall and handsome, furnishing an excellent and strong timber. The ashes of this tree are in demand as an article of diet among certain wild tribes inhabiting the forests about the Nilgiri Hills. The demand for it has been attributed to the large proportion of pure carbonate of potash which it yields; the diet of the same people including a large quantity of tamarinds. It is found abundantly in the N. Circars, where Roxburgh describes it as universally esteemed for every economical purpose; towards the centre it is of a chocolate colour, and is exceedingly durable. For house and ship-building the Natives reckon it superior to every sort except *Pentaptera Tomentosa*† and Teak: merits further inquiry."

† Arseyna.

*Catalogue of trees, Godavery Forests,* page 262.

Siriman *(Anogeissus latifolius)* wood is said to be one of the hardest in the forest. It grows to an enormous size. Axles of carts are generally made of this—the *Conocarpus latifolius.*

Extract from "*Conductor Skinner's Indian and Burman Timbers*" page 73.

Specific gravity, 1·100.
Weight of seasoned wood per cubic foot, 55 lbs.

*Characteristics and uses.*—This tree yields superior wood for sustaining cross strain and direct cohesive strength. The wood is heavy, tough, durable and fibrous, close and even-grained, of a dark brown colour interspersed with darker coloured veins—a cubic foot of unseasoned wood weighs from 70 to 80 lbs.

*Uses.*—The wood is esteemed by the Natives as a superior wood for ship-building: it is also used in the construction of carts and furniture, and it has been recommended to be used in the Gun-Carriage Factory‡ as a substitute for Trincomalee.§ The sap-wood is also strong, hard, and close-grained: but not durable; used in the construction of country carts and Native houses.

‡ Madras.
§ *Berrya ammonilla,* or Ceylon wood.

*Extract from "Cunningham."*

The scientific name given by Major-General Cunningham is not right, "*Grislea Tomentosa*" is a red flowering which gives the Dhae-phool (Drury, page 242), he was misled by the similarity of names.

*Major (now Major-General) Cunningham's Stone and Timber of the Gwalior Territory.*

Dhao Dhao-Hind.

"In appearance, the Dhao is similar to the Kardahi, but its colour is rather darker. It is most probably only a variety of the same tree of a large growth, as timbers are procurable in the Sheopoor jungles, 18 feet length by 18 inches in thickness. As a building tree, the Dhao is superior

to Kardahi, both in the transverse strength and in direct cohesive power. The heart-wood is of a deep claret colour like that of the tamarind; but I have had no opportunity of examining any large specimens. Should the heart-wood be found to equal the sap-wood, of which there can be no reasonable doubt, the Dhao may become a very fair substitute for Sâl, and it is fully equal to it in direct cohesive power, and not very much inferior to it in transverse strength. My specimens have all been taken from young trees of about 30 years' growth, but other specimens from more mature trees will, I have no doubt, be found quite equal to Sâl. In the neighbourhood of the jungles, the Dhao is much used for naves of wheels, and generally for beams and rafters."

*Note by Captain Wood.*—In April last, when demarcating the forests in the Gonda District, I was much struck with the Dhao Forest after leaving the Sâl, which were in fresh green leaf, for the trees were perfectly leafless, and their trunks smooth and of a light slate colour. I made enquiries about the nature and uses of the timber. I found that the principal use it was put to was for the axles of carts (which in the neighbourhood of the forest are made without iron), that the Taroos used it for Bhangy poles instead of bamboo, and for the ridge pole in their houses. I knew at once that the wood must be very tough and strong, being preferred to Sâl, and though I believed my instructions were only to retain for the reserved forests such forests in which Sâl, Sissoo, Toon and Ebony abounded, I thought it proper to reserve such Dhao Forests till I found out more about the timber, particularly as the soil did not appear well suited for agriculture.

### Cohesive Strength.

It appears from Major-General Cunningham's experiments, that the mean breaking weights of one square inch of Sâl, Sissoo, and Dhao were—

| | | |
|---|---|---|
| Sâl | 11·220 | lbs. |
| Best Sissoo | 11·659 | ,, |
| Dhao | 13·336 | ,, |

In one experiment the breaking weight was 20,979 lbs, whereas the greatest breaking weight for Sâl was 13·734 lbs, and for Sissoo 12·088 lbs.

### Transverse Strength.

In the experiments in transverse strength, the mean breaking weight of specimens one inch square, and bearing distance 22 inches, was—

| | | |
|---|---|---|
| Sâl | 6·27 | lbs. |
| Dhao | 3·97* | ,, |
| Sissoo | 4·35 | ,, |

Still, we have the fact that the Native cart-men prefer Dhao to Sâl for their axles, where transverse strength is mostly required. This may be accounted for, perhaps, by the superior elasticity of Dhao which may suit better where there are constant jolts and sudden strains.

Dhao would, in fixtures, do better for tie-beams and king-posts than Sâl, and I expect also in the construction of Railway and other carriages. The Railway Department, I believe, build most of their carriages of teak. The disadvantage of Dhao would be its weight. Major-General Cunningham, in his experiments on direct cohesive strength, gives the breaking weight of one square inch of teak as 10·240 lbs, whereas the lowest figure in experiments on Dhao is 10·386, and the highest 20·979 on more than double that of the teak. I propose in May to send two or three logs of Dhao to the Officers in charge of the Futtehgurh Gun-Carriage Agency and Railway Locomotive Department, Allahabad, with a request that they will let me know if the wood would be of use in their Departments.

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* N. B.—It is mentioned before, that those experiments were tried with the Sap-wood, see Note; and again Dr. Wight says, that the specimens, though not the best, sustain 500 lbs, but he does not give the bearing distance.

The wood in the forest is not very large, but I should say that a good many logs, 24 feet long and 17 inches diameter, 6 feet from the ground, might be obtained. And if the wood be included in the reserved woods, I have no doubt but that in a few years much better timber might be obtained.

## C.

*District Name.*

Arseyna.

*Scientific Names.*

| | |
|---|---|
| Terminalia tomentosa | Wight and Arnott. |
| Pentaptera ,, | Roxburgh. |
| Terminalia elliptica | Willd. |
| ,, alata | Roxburgh. |

*Native Names.*

| | |
|---|---|
| Arseyna ... Oudh | Asan ... ... Duk. |
| Saj or Seine... N. W. P. | ,, ... ... Hind. |
| Ashan... ... Bengallee | Eyne ... ... ,, of Nagpoor. |
| Aans ... ... ,, (?) | Eyn ... ... Mahratta. |
| Piya-Shal ... ,, | Maradu Maram, Tamil. |
| Madi ... ... Canara | Carru Maradu ,, |
| Karrai Mutti ,, | Nulla, Madi, Telegoo |
| Pinsal Duk. | |

Extract from "*Drury's Useful Plants of India,*" page 433.—"Description.—Tree: bark deeply cracked: leaves nearly opposite, linear-oblong, somewhat cordate at the base, pubescent but finally glabrous above, tomentose or pubescent beneath, with thick stalked turbinate glands on the mid-rib near the base: &c., &c., &c., is found in Concan, Oudh, Monghyr."

*Uses, &c.*—The timber is valuable, and is much used in making shafts for gigs, and other things where toughness of fibre is required. The bark is astringent, and used for dyeing black.

Extract from "*Balfour's Timber Trees of India,*" page 252.—"Common in the Ghâts of the Malabar Coast. Grows in the Concans and at Monghyr, Rajmahal, and Oudh. Grows in abundance in the Nalla Malai, and is a well known valuable timber in the forests of the Godavery. In the Madras Presidency it is used for house-building, it bears a good transverse strain, and is a wood much esteemed for all Railway purposes. The Asan tree of Lucknow grows spontaneously in the Teraee Jungles, and its wood is considered durable and elastic, and for many purposes preferable to Sâl. Writing of it as it occurs in Nagpoor, Captain Sankey says, that like Bejasar,* this timber has white wood surrounding the body and heart, which is of a blackish colour; the ring, however, in this case, does not exceed ½ inch in breadth. The dark wood is exceedingly heavy, being exactly of the same weight as water, and has a much more winding grain than Bejasar. In strength it is far superior to all its forest congeners, and from the strength given by Barlow for American Teak, it even appears to excel that celebrated timber. Unfortunately, he adds, its length in Nagpoor is limited, seldom furnishing more than a 20 feet tie-beam, from the crooked manner in which the tree grows. It is a difficult timber to work up. Splits freely when in exposed situations, and by all accounts is very subject to dry rot. Were the latter defect overcome by the steeping process, and the former guarded against, he knows of no timber which can bear comparison with it; for the joists of a terraced roof it would be invaluable. White-ants will not attack it. He says that in Nagpoor, its average length is 18 feet, and average girth 4½ feet, and the maxima 28 to 24 feet, and its selling price 5 annas the cubic foot. Captain Sankey, Voight, Captain Beddome, Cal. Cat. Ex. 1862.

Pterocarpus marsupium, or ,, bilobus.

*Extract from Cleghorn.*—From Cleghorn's Forests and Gardens of South India, page 139.—List of woods. Madras Exhibition, 1855. Terminalia alata, a very large tree, used on the west coast for house-building and making canoes.

*Extract from Colonel Ramsay's Report*, 1861.—From Major (now Colonel) Ramsay's Report of the Kumaon and Gurhwal Forests, 1861, page 8.—"Saj or Seine. Timber hard, fine grained and durable. Liable to warp if much exposed to the sun. Used for building purposes. Next to Sâl in strength, and general uses common in lower Hills."

*Note by Captain Wood.*—In the Oudh Forests the Arseyna is a fine tree with a straight stem, and has not the faults of the Nagpoor timber. There would be no difficulty about the "steeping process," as timber, to reach most of the timber markets, would have to undergo considerable water-carriage. The villagers use the saplings for their fences and houses, now they cannot obtain Sâl; very many fine trees are annually destroyed by the villagers for the bark, which they take from the living trees from two to six feet from the ground.

It burns very readily, and a dry fallen tree once set on fire will burn to the end of the branches, helping greatly to the jungle fires.

## D.

### List of Rates, 1863–64.

| | Rs. | A. | P. | | Rs. | A. | P. |
|---|---|---|---|---|---|---|---|
| Rafting logs from left to right bank of Sardah, each | 0 | 5 | 0 | | | | |
| „ sleepers ditto ditto per 100 | 7 | 0 | 0 | | | | |
| Dragging logs to or from water, each log ... ... | 0 | 8 | 0 | to | 1 | 0 | 0 |
| „ sleepers ditto per 100 ... ... | 2 | 0 | 0 | | | | |
| Carriage of sleepers Forest to Depôt, each ... | 0 | 8 | 0 | | | | |
| „ Depôt to Kunhout, each ... | 0 | 8 | 0 | | | | |

*Carriage of Logs from Forest to Sardah Depôt.*

| Length in feet. | Mean girth inches. | Rate per log. | | | Rate per cubic foot. | | |
|---|---|---|---|---|---|---|---|
| | | Rs. | A. | P. | Rs. | A. | P. |
| 24 | 60 | 6 | 0 | 0 | 0 | 2 | 7 |
| 24 | 65 | 7 | 8 | 0 | 0 | 2 | 9 |
| 24 | 70 | 9 | 0 | 0 | 0 | 2 | 10 |
| 24 | 75 | 10 | 8 | 0 | 0 | 2 | 11 |
| 24 | 80 | 15 | 0 | 0 | 0 | 3 | 7 |
| 24 | 85 | 17 | 0 | 0 | 0 | 3 | 6 |
| 24 | 90 | 21 | 0 | 0 | 0 | 4 | 0 |
| 24 | 95 | 24 | 0 | 0 | 0 | 4 | 1 |
| 24 | 100 | 30 | 0 | 0 | 0 | 4 | 7 |

No logs have been sent down the Kunhout to Cawnpoor, but the rate is Rs. 5 per log, or, on an average, something less than two annas a cubic foot.

I sent some logs down to Fyzabad, and gave contracts at the rate of six cubic feet for the Rupee, or 2 annas 8 pie per cubic foot. To Byram Ghât it should not be more than 2 annas 3 pie.

**E.**

*Statement of Monthly Receipts and Expenditure for the Forest*

| | 1863. October. | 1863. November. | 1863. December. | 1864. January. | 1864. February. | 1864. March. | 1864. April. |
|---|---|---|---|---|---|---|---|
| **Receipts.** | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P |
| I.—Sale of timber brought to Depôt by Government agency ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| II.—Sale of timber, fire-wood, bamboos, and charcoal, removed from the forests by purchasers, including seigniorage | | | | | | | |
| III.—Duty on foreign timber ... ... ... | | | | | | | |
| IV.—Permit fees and rent of jungles and privileges ... ... .. ... | | | | | | | |
| V.—Grazing dues ... ... ... ... | | | | | | | |
| VI.—Sale of fruits, babool pods, and other minor forest produce .. ... ... | | | | | | | |
| VII.—Sale of confiscated drift and waif timber | | | | | | | |
| VIII.—Fines and forfeitures ... ... ... | | | | | | | |
| IX.—Miscellaneous receipts .. ... ... | | | | | | | |
| Total of Receipts ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| **Expenditure.** | | | | | | | |
| *A.—Conservancy and Working.* | | | | | | | |
| I.—Timber expenses for felling, cutting, clearing, sawing, and the transport of timber by land or water to Depôts; also charges for storing, securing, watching, piling, and arrangements for selling timber ... | 260 12 0 | 255 15 8 | 119 0 0 | 276 9 0 | 729 2 0 | 1,649 14 1 | 5,988 3 4 |
| II.—Purchase of elephants, cattle, and dead-stock, tools and plant. | | | | | | | |
| III.—Feed and keep of elephants and cattle | 50 0 0 | 50 0 0 | 50 0 0 | 50 0 0 | 50 0 0 | 50 0 0 | 50 0 0 |
| IV.—Rent of leased forests, &c., seigniorage paid for timber felled in leased forests, shares of villages, &c., others in the revenue of forests. | | | | | | | |
| V.—Charges connected with the collection of revenue on grass, fruits, and miscellaneous forest produce. | | | | | | | |
| VI.—Plantations. | | | | | | | |
| VII.—Forest work, *viz.*, cutting of creepers, protection of forests or trees against fire, and other work for the conservancy and improvement of the forests; charges for selecting, marking, and girdling of the trees to be felled ... | 65 0 0 | 95 9 0 | 194 4 11 | 207 13 0 | 255 8 0 | 261 8 0 | 252 11 4 |
| VIII.—Forest survey, topographical and valuation survey, to ascertain the contents of forests, and annual rate of timber production ... ... ... ... ... | ..... | ..... | ..... | 106 1 1 | 499 1 2 | 803 15 0 | 724 4 3 |
| IX.—Experiments to test the value of timber of different kinds ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | 196 0 0 |
| X.—Communications, buildings, and timber works, fences, boundary pillars, and posts, and boundary division paths ... | ..... | ..... | ..... | ..... | ..... | 27 8 0 | 6,000 8 0 |
| Total of Conservancy and Working... | 375 12 0 | 401 8 8 | 363 4 11 | 700 7 1 | 1,533 11 2 | 2,792 13 1 | 13,211 10 11 |
| *B.—Establishments.* | | | | | | | |
| I.—Salaries— | | | | | | | |
| 1.—Pay of Conservator ... ... ... | 700 0 0 | 700 0 0 | 700 0 0 | 700 0 0 | 350 0 0 | 350 0 0 | 350 0 0 |
| 2.—Pay of Executive Officers ... ... | ..... | ..... | ..... | 75 9 3 | 578 4 0 | 578 4 0 | 578 4 0 |
| 3.—Office Establishment ... ... ... | 212 0 0 | 212 0 0 | 212 0 0 | 212 0 0 | 182 8 3 | 181 0 6 | 212 0 0 |
| (*a*)—Direction ... ... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| (*b*)—Executive ... .. ... ... | | | | | | | |
| 4.—Forest Conservancy Establishments | 101 0 0 | 106 0 0 | 106 0 0 | 101 0 0 | 106 0 0 | 106 0 0 | 106 0 0 |
| 5.—Timber Depôt and Work Establishments. | | | | | | | |
| 6.—Deputation and special allowances. | | | | | | | |
| II.—Travelling allowances, including batta, travelling expenses, and tentage— | | | | | | | |
| 1.—Conservator ... ... ... ... | ..... | 150 0 0 | 150 0 0 | 150 0 0 | ..... | ..... | ..... |
| 2.—Executive Officers ... ... ... | ..... | ..... | ..... | 67 8 0 | 315 8 0 | 155 0 0 | 178 8 0 |
| 3.—Subordinate Establishments ... | ..... | 70 10 8 | 70 10 8 | 70 10 8 | 57 8 1 | 57 0 2 | 67 5 |
| III.—Contingencies— | | | | | | | |
| 1.—Stationery ... ... ... ... | ..... | ..... | ..... | ..... | 2 0 0 | 6 0 0 | ..... |
| 2.—Office rent, carriage of tents, and Office records ... ... ... ... | ..... | 58 10 3 | 46 0 0 | 40 0 0 | 18 9 0 | 29 10 0 | ..... |
| 3.—Pay of Police Guards... ... ... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| 4.—Sundries ... ... ... ... ... | 78 0 0 | 16 0 0 | 7 4 0 | 1 0 0 | 86 12 0 | 24 12 0 | 20 8 0 |
| Total of Establishments ... | 1,091 0 0 | 1,313 4 11 | 1,291 14 8 | 1,417 11 11 | 1,697 1 4 | 1,487 10 8 | 1,512 9 |
| Total of Expenditure ... | 1,466 12 0 | 1,714 13 7 | 1,655 3 7 | 2,118 3 0 | 3230 12 6 | 4,280 7 9 | 14,724 4 |

*year,* 1863-64, *under the new Budget headings.*

| 1864. May. | 1864. June. | 1864. July. | 1864. August. | 1864. September. | Total. | REMARKS. |
|---|---|---|---|---|---|---|
| Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | |
| 29,591 6 0 | ..... | ..... | 565 8 0 | ..... | 30,156 14 0 | These sums have been notified as having been received by Deputy Commissioner, and such only have been returned in the monthly statement of receipts. The amount Rs. 30,156-14 is correct; but as all amounts under the other sub-headings have not been notified monthly, I have taken the amount, as shown in the "Abstract," Appendix F— Rs. A. P. of which ... 2,848 2 10 II.—Timber removed by purchasers. is added to ... 30,156 14 0 I.—Sale of timber brought to Depôt; for Column I, Financial results of 1863. making a total of 33,005 0 10 The figures in Column II, Financial results, are also taken from "Abstract," Appendix F. |
| 29,591 6 0 | ..... | ..... | 565 8 0 | ..... | 30,156 14 0 | |
| 638 3 0 | 945 11 0 | 538 2 0 | 218 0 0 | 62 6 0 | 11,681 14 1 | |
| 50 0 0 | 50 0 0 | 50 0 0 | 50 0 0 | 50 0 0 | 600 0 0 | |
| ..... | ..... | ..... | ..... | ..... | 1,392 6 3 | Demarcation ... } Rs. A. P. 3,525 11 9 Professional Survey ... |
| ..... | ..... | ..... | ..... | ..... | 2,133 5 6 | Rs. A. P. 18,787 5 1 Recovered from Contractor ... ... 673 0 0 |
| 102 9 0 | ..... | ..... | ..... | ..... | 298 9 0 | See Column 5, Financial results, 1863-64 18,114 5 1 |
| 32 8 0 | 146 6 0 | ..... | ..... | ..... | 6,206 14 0 | Rs. A. P. 22,313 0 10 Survey ... ... ... 3,525 11 9 |
| 823 4 0 | 1,142 1 0 | 588 2 0 | 268 0 0 | 112 6 0 | 22,313 0 10 | 18,787 5 1 |
| 350 0 0 | 350 0 0 | 350 0 0 | 350 0 0 | 350 0 0 | 5,600 0 0 | |
| 578 4 0 | 578 4 0 | 578 4 0 | 578 4 0 | 578 4 0 | 4,701 9 3 | |
| 212 0 0 | 211 0 0 | 212 0 0 | 212 0 0 | 212 0 0 | 2,482 8 9 | Rs. A. P. Survey ... ... ... ... ... 3,525 11 9 |
| 60 0 0 | 60 0 0 | 60 0 0 | 60 0 0 | 60 0 0 | 300 0 0 | Establishment and Contingencies ... 17,162 14 6 |
| 106 0 0 | 106 0 0 | 106 0 0 | 106 0 0 | 106 0 0 | 1,262 0 0 | See Column 7, Financial results, 1863-64 20,688 10 3 |
| ..... | ..... | ..... | ..... | ..... | 450 0 0 | |
| 150 0 0 | 50 0 0 | ..... | 30 0 0 | 150 0 0 | 1,096 8 0 | |
| 67 5 4 | 60 10 8 | 40 10 8 | ..... | ..... | 562 8 3 | Rs. A. P. Financial results, Column 5 ... ... 18,114 5 1 Column 7 .. ... ... ... 20,688 10 3 |
| 20 0 | 2 3 0 | 2 2 6 | 2 3 9 | 0 8 0 | 17 1 9 | To be charged against Department ... 38,802 15 4 |
| ..... | 35 0 0 | 30 0 0 | 40 12 0 | 30 0 0 | 328 9 8 | |
| 20 0 0 | 20 0 0 | 20 0 0 | ..... | ..... | 60 0 0 | Rs. A. P. |
| 18 4 0 | 17 11 0 | 21 15 9 | 9 3 7 | 0 11 0 | 302 1 3 | Total expenditure ... ... ... 39,475 15 4 Recovered from Contractor ... ... 673 0 0 |
| 1,563 13 4 | 1,490 12 8 | 1,421 0 11 | 1,388 7 3 | 1,487 7 6 | 17,162 14 6 | To be charged against the Department 38,802 15 4 |
| 2,387 1 4 | 2,632 13 8 | 2,009 2 11 | 1,656 7 3 | 1,599 13 6 | 39,475 15 4 | |

# F.

*Receipts for Grazing and Miscellaneous Forest produce,* 1861-62, 1862-63, *and* 1863-64, *Mohumdee District, under new Budget headings.*

| Year. | Particulars. | Lot or Sold for. | Realized. | Due. | Total. |
|---|---|---|---|---|---|
| | | Rs A P. | Rs. A. P. | Rs. A. P. | Rs. A. P. |
| 1861-62 | V. Grazing dues ... ... | 4,500 0 0 | 4,500 0 0 | 0 0 0 | |
| | VI. Miscellaneous Forest produce ... .. ... | 550 0 0 | 550 0 0 | 0 0 0 | 5,050 0 0 |
| 1862-63 | II. Timber removed by purchasers ... ... ... | 5,392 0 0 | 5,392 0 0 | 0 0 0 | |
| | V. Grazing dues ... ... | 5,500 0 0 | 5,500 0 0 | 0 0 0 | |
| | VI. Miscellaneous Forest produce ... ... ... | 550 0 0 | 550 0 0 | 0 0 0 | 11,442 0 0 |
| 1863-64 | V. Grazing dues ... ... | 5,500 0 0 | 5,500 0 0 | 0 0 0 | |
| | VI. Miscellaneous Forest produce ... ... ... | 550 0 0 | 550 0 0 | 0 0 0 | 6,050 0 0 |
| | Grand Total ... | 22,542 0 0 | 22,542 0 0 | 0 0 0 | 22,542 0 0 |

Only the money from the Kyreegurh Forests has been credited. The E. A. Commissioner's Statement, page 67, shows several sums from Boor, &c., &c.

Contract was for Rs. 6,250, but Rs. 200 were allowed for drawback.

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*Receipts for Grazing and Miscellaneous Forest produce,* 1861-62, 1862-63, *and* 1863-64, *Baraitch District under new Budget headings.*

| Year. | Particulars. | Lot or Sold for. | Realized. | Due. | Total. |
|---|---|---|---|---|---|
| | | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. |
| 1861-62 | II. Sale of timber removed by purchasers ... ... | 6,086 9 0 | 6,086 9 0 | 0 0 0 | |
| | V. Grazing dues .. ... | 9,330 0 0 | 9,330 0 0 | 0 0 0 | |
| | VI. Sale of Minor Forest produce ... ... ... | 4,204 0 0 | 4,204 0 0 | 0 0 0 | |
| | Total ... | 19,620 9 0 | 19,620 9 0 | 0 0 0 | 19,620 9 0 |
| 1862-63 | II. Sale of timber removed by purchasers . ... | 852 14 8 | 852 14 8 | 0 0 0 | |
| | V. Grazing dues ... ... | 11,905 0 0 | 11,905 0 0 | 0 0 0 | |
| | VI. Sale of Minor Forest produce ... .. .. | 899 0 0 | 899 0 0 | 0 0 0 | |
| | Total . | 13,656 14 8 | 13,656 14 8 | 0 0 0 | 13,656 14 8 |
| 1863-64 | II. Sale of timber removed by purchasers ... ... | 2,656 11 0 | 2,656 11 0 | 0 0 0 | |
| | V. Grazing dues ... ... | 15,890 0 0 | 15,890 0 0 | 0 0 0 | |
| | VI. Sale of Minor Forest produce ... .. ... | 2,152 0 0 | 2,152 0 0 | 0 0 0 | |
| | Total ... | 20,698 11 0 | 20,698 11 0 | 0 0 0 | 20,698 11 0 |
| | Grand Total ... | 53,976 2 8 | 53,976 2 8 | 0 0 0 | 53,976 2 8 |

*Receipts for Grazing and Miscellaneous Forest produce,* 1861-62, 1862-63, *and* 1863-64, *District, under new Budget headings.*

| Year. | Particulars. | Lot or Sold for. | Realized. | Due. | Total. |
|---|---|---|---|---|---|
| | | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. |
| 1861-62 | II. Sale of timber removed by purchasers ... ... | 0 0 0 | 0 0 0 | 0 0 0 | |
| | V. Grazing dues ... ... | 2,057 0 0 | 2,057 0 0 | 0 0 0 | |
| | VI. Sale of Minor Forest produce ... ... ... | 1,443 0 0 | 1,443 0 0 | 0 0 0 | |
| | Total ... | 3,500 0 0 | 3,500 0 0 | 0 0 0 | 3,500 0 0 |
| 1862-63 | II. Sale of timber removed by purchasers ... ... | 39 0 0 | 39 0 0 | 0 0 0 | |
| | V. Grazing dues ... ... | 2,057 0 0 | 2,057 0 0 | 0 0 0 | |
| | VI. Sale of Minor Forest produce ... ... ... | 1,443 0 0 | 1,443 0 0 | 0 0 0 | |
| | Total ... | 3,539 0 0 | 3,539 0 0 | 0 0 0 | 3,539 0 0 |
| 1863-64 | II. Sale of timber removed by purchasers ... ... | 191 7 10 | 191 7 10 | 0 0 0 | |
| | V. Grazing Dues ... ... | 2,057 0 0 | 2,057 0 0 | 0 0 0 | |
| | VI. Sale of Minor Forest produce ... .. ... | 1,443 0 0 | 1,443 0 0 | 0 0 0 | |
| | Total ... | 3,691 7 10 | 3,691 7 10 | 0 0 0 | 3,691 7 10 |
| | Grand Total ... | 10,730 7 10 | 10,730 7 10 | 0 0 0 | 10,730 7 10 |

*Abstract of Receipts for Grazing and Miscellaneous Forest produce, Mohumdee, Baraitch, and Gonda for* 1861-62, 1862-63, *and* 1863-64.

| Year. | Particulars. | Lot or Sold for. | Realized. | Due. | Total. |
|---|---|---|---|---|---|
| | | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. |
| 1861-62 | II. Sale of timber removed by purchasers ... ... | 6,086 9 0 | | | |
| | V. Grazing dues ... ... | 15,887 0 0 | | | |
| | VI. Minor Forest produce ... | 6,197 0 0 | | | |
| | | | 28,170 9 0 | | |
| 1862-63 | II. Sale of timber removed by purchasers ... ... | 6,283 14 8 | | | |
| | V. Grazing dues ... ... | 19,462 0 0 | | | |
| | VI. Minor Forest produce ... | 2,892 0 0 | | | |
| | | | 28,637 14 8 | | |
| 1863-64 | II. Sale of timber removed by purchasers ... ... | 2,848 2 10 | | | |
| | V. Grazing dues ... ... | 23,447 0 0 | | | |
| | VI. Minor Forest produce ... | 4,145 0 0 | | | |
| | | | 30,440 2 10 | | 87,248 10 6 |
| | *For the* 3 *years.* | | | *Mean.* | |
| | II. Sale of timber, &c., removed by purchasers ... ... | 15,218 10 6 | | 5,072 14 2 | |
| | V. Grazing dues ... ... | 58,796 0 0 | | 19,598 10 8 | |
| | VI. Minor Forest produce ... | 13,234 0 0 | | 4,411 5 4 | |
| | | 87,248 10 6 | | 29,082 14 2 | |

| | Rs. A. P. |
|---|---|
| Total Mohumdee ... | 22,542 0 0 |
| „ Baraitch ... | 53,976 2 8 |
| „ Gonda ... | 10,730 7 10 |
| | 87,248 10 6 |

*ktober* 1861 *to* 30*th September* 1864. *Statement of Grazing and Minor Forest produce, Mohumdee District.*

*Receipts*

| Date. | Particulars. | Lot or Sold for. | Realized. | Due. | Remarks. |
|---|---|---|---|---|---|
| | *No. 1.—Accounts as per leases given by Deputy Commissioner.* | | | | |
| | | Rs. A. P. | Rs. A. P. | | |
| 1861-62. | Grazing ... ... | 8,833 0 0 | 8,833 0 0 | ... ... | Rs. 3,333 recovered from the Bhoor Elaka, and Rs. 458 from Kyreegurh previous to transfer of charge of Oudh Forest to Superintendent, and Rs. 4,042 since; Rs. 62 from Kustah, and Rs. 550 from Kyreegurh. |
| | Miscellaneous Forest produce ... ... | 625 0 0 | 625 0 0 | ... ... | |
| | Total ... | ... ... | 9,448 0 0 | ... ... | |
| | *No. 2.—Accounts as per Treasury papers of this Office.* | | | | |
| | | Rs. A. P. | Rs. A. P. | | |
| | Grazing ... ... | 0 0 0 | 9,814 0 0 | ... ... | Rs. 1,975 from Baraitch, Rs. 4,955 from Bhoor, and Rs. 2,886 from Khyreegurh. |
| | Minor Forest produce ... ... | 0 0 0 | 843 15 0 | ... ... | Rs. 24-8-0 from Baraitch, Rs. 76 from Khyreegurh, Rs. 270 from Bhoor, and Rs. 273-7-0 Miscellaneous. |
| | Total .. | ... ... | 10,657 15 0 | ... ... | |
| | *No. 1.—Accounts as per leases given by Deputy Commissioner.* | | | | |
| | | Rs. A. P. | Rs. A. P. | | |
| 1862-63 | Grazing ... ... | 2,858 0 0 | 2,858 0 0 | ... ... | To Raj Gunga Sing for three months, and to Ranee of Bhoor for other portion of year. |
| | Miscellaneous Forest produce ... ... | 235 0 0 | 235 0 0* | ... ... | * From Pergunnah Hydrabad, Rs. 150, and Kustah, Rs. 85. |
| | Total ... | ... ... | 3,093 0 0 | ... ... | |
| | *No. 2.—Accounts as per Treasury papers of this Office.* | | | | |
| | | Rs. A. P. | Rs. A. P. | | |
| | Grazing ... ... | 0 0 0 | 10,455 8 0 | ... ... | Rs. 8,384-8-0 from Baraitch, and Rs. 2,071 from Bhoor. |
| | Minor Forest produce ... ... | 0 0 0 | 3,988 12 0 | .. ... | Rs. 3,846 from Baraitch, and Rs. 142-12-0 Miscellaneous. |
| | Total ... | ... ... | 14,444 4 0 | ... ... | |
| | *No. 1.—Accounts as per leases given by Deputy Commissioner.* | | | | |
| | | Rs. A. P. | Rs. A. P. | | |
| 1863-64. | Grazing ... ... | 2,725 0 0 | 2,725 0 0 | ... ... | To Ranee of Bhoor. |
| | Minor Forest produce ... .. | 488 0 0 | 488 0 0 | ... ... | From Raj Hydrabad, Rs. 36, and Kustah, Rs. 127. |
| | Total ... | ... ... | 3,213 0 0 | ... ... | |
| | *No. 2.—Accounts as per Treasury papers of this Office.* | | | | |
| | | Rs. A. P. | Rs. A. P. | | |
| | Grazing ... ... | 0 0 0 | 12,553 8 0 | ... ... | Rs. 3,581 from Baraitch, Rs. 3,672-8-0 from Bhoor, and Rs. 5,300 from Khyreegurh. |
| | Minor Forest produce ... ... | 0 0 0 | 4,155 10 0 | ... ... | Rs. 3,540 from Baraitch, Rs. 150 from Khyreegurh, and Rs. 465-13-0 Miscellaneous. |
| | Total ... | ... ... | 16,709 5 0 | ... ... | |
| | No. 1.—Grand Total | ... ... | 15,754 0 0 | ... ... | Grazing Rs. 14,416, and Minor Forest produce, Rs. 1,338. |
| | No. 2.—Grand Total | ... ... | 41,811 8 0 | ... ... | Grazing Rs. 32,823, and Minor Forest produce, Rs. 987-8-0. |

Mohumdee;
Deputy Commissioner's Office,
*The* 25*th January*, 1865.

W. HALDANE,
*Extra Asstt. Commissioner.*

*Memo. of Receipts of Grazing and other Forest produce remitted to Lukeempoor from 1st October 1861 to 30th September 1864.*

| Date. | Lac. | Grazing. | Kutha. | Mowha. | Logs. | Honey and Wax. | Peepul. | Savings. | Amount. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|---|
| | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | Rs. A. P. | |
| 28th April 1862 ... ... | 24 8 0 | 1,975 0 0 | ... ... | ... ... | ... ... | ... ... | ... ... | ... ... | 1,999 8 0 | |
| 29th „ „ ... ... | 632 8 0 | 745 8 0 | 218 0 0 | ... ... | ... ... | ... ... | ... ... | ... ... | 1,596 0 0 | |
| 30th May „ ... ... | ... ... | 731 0 0 | ... ... | 440 0 0 | ... ... | ... ... | ... ... | ... ... | 1,171 0 0 | |
| 19th June „ ... ... | ... ... | ... ... | 51 8 0 | 300 0 0 | ... ... | ... ... | ... ... | ... ... | 351 8 0 | |
| 13th August „ ... | 1,162 0 0 | 2,976 0 0 | 156 8 0 | 272 0 0 | ... ... | ... ... | ... ... | ... ... | 4,566 8 0 | |
| 19th September 1862 ... | 75 0 0 | 625 0 0 | ... ... | 229 0 0 | ... ... | ... ... | ... ... | ... ... | 929 0 0 | |
| | | | | | | | | | | 10,613 8 0 |
| 19th November 1862 ... | ... ... | 127 0 0 | 36 0 0 | ... ... | ... ... | ... ... | ... ... | ... ... | 163 0 0 | |
| 8th March 1863 ... | 67 0 0 | 2,372 0 0 | 180 8 0 | ... ... | ... ... | ... ... | ... ... | ... ... | 2,619 8 0 | |
| 30th April „ ... ... | ... ... | ... ... | 33 0 0 | ... ... | 852 14 8 | ... ... | ... ... | ... ... | 885 14 8 | |
| 24th July „ ... ... | ... ... | 3,581 0 0 | ... ... | ... ... | ... ... | ... ... | ... ... | ... ... | 3,581 0 0 | |
| 24th „ „ ... ... | 100 0 0 | ... ... | 208 0 0 | ... ... | ... ... | ... ... | ... ... | ... ... | 308 0 0 | |
| 28th September 1863 ... | ... ... | ... ... | 65 0 0 | 166 0 0 | ... ... | ... ... | ... ... | ... ... | 231 0 0 | |
| | | | | | | | | | | 7,788 6 8 |
| 16th October 1863 ... | ... ... | ... ... | ... ... | ... ... | 1,636 0 0 | ... ... | ... ... | ... ... | 1,636 0 0 | |
| 12th December „ ... | 33 0 0 | 258 0 0 | 52 8 0 | ... ... | ... ... | ... ... | ... ... | 72 8 0 | 416 0 0 | |
| 16th April 1864 ... ... | 100 0 0 | ... ... | 28 0 0 | ... ... | 80 0 0 | 96 0 0 | 291 0 0 | ... ... | 595 0 0 | |
| 27th May „ ... ... | ... ... | ... ... | 210 0 0 | 96 0 0 | 250 6 0 | ... ... | 1 0 0 | ... ... | 557 6 0 | |
| 30th August „ ... ... | 58 0 0 | ... ... | 238 0 0 | 672 0 0 | 278 9 0 | 38 0 0 | ... ... | ... ... | 1,284 9 0 | |
| 23rd December 1864 ... | 42 0 0 | ... ... | ... ... | 237 0 0 | 411 12 0 | 38 0 0 | ... ... | ... ... | 728 12 0 | Out of Drafts of Rs. 1,048-12-0. |
| | | | | | | | | | | 5,217 11 0 |
| Total ... | 2,294 0 0 | 13,390 8 0 | 1,477 0 0 | 2,412 0 0 | 3,509 9 8 | 172 0 0 | 292 0 0 | 72 8 0 | 23,619 9 8 | |
| Total credited in the accounts of Baraitch ... | 581 0 0 | 23,734 8 0 | ... ... | ... ... | 6,086 9 0 | ... ... | ... ... | Toon. 27 0 0 | 30,429 1 0 | |
| | | | | | | | | Total ... | 54,048 10 8 | |
| | | | | | | | Deduct Establishment ... | | 72 8 0 | |
| | | | | | | | Net Forest Receipts ... | | 53,976 2 8 | |

Zillah Baraitch;
*The 20th January*, 1865.

J. G. ANDERSON
*Deputy*

*ment of Contracts of Grazing and Miscellaneous Forest Produce of Baraitch District, from 1st October 1861 to 30th September 1864.*

| Date. | Particulars. | Lot or sold for. | | | Realized. | | | Due. |
|---|---|---|---|---|---|---|---|---|
| | | Rs. | A. | P. | Rs. | A. | P. | |
| 1861-62 | Grazing ... ... ... | 9,330 | 0 | 0 | 9,330 | 0 | 0 | |
| | Kutha ... ... ... ... | 488 | 0 | 0 | 488 | 0 | 0 | |
| | Mowha... ... ... ... | 1,241 | 0 | 0 | 1,241 | 0 | 0 | |
| | Lac ... ... ... ... | 2,475 | 0 | 0 | 2,475 | 0 | 0 | |
| | Old timber ... ... ... | 6,086 | 9 | 0 | 6,086 | 9 | 0 | |
| | | 19,620 | 9 | 0 | 19,620 | 9 | 0 | |
| 1862-63 | Grazing ... ... ... | 11,905 | 0 | 0 | 11,905 | 0 | 0 | |
| | Kutha ... ... ... ... | 513 | 0 | 0 | 513 | 0 | 0 | |
| | Mowha ... ... ... | 186 | 0 | 0 | 186 | 0 | 0 | |
| | Lac ... ... ... ... | 200 | 0 | 0 | 200 | 0 | 0 | |
| | Old timber ... ... ... | 852 | 14 | 8 | 852 | 14 | 8 | |
| | | 13,656 | 14 | 8 | 13,656 | 14 | 8 | |
| 1863-64 | Grazing ... ... ... | 15,890 | 0 | 0 | 15,890 | 0 | 0 | |
| | Wax and Honey ... ... | 172 | 0 | 0 | 172 | 0 | 0 | |
| | Peepul ... ... ... ... | 292 | 0 | 0 | 292 | 0 | 0 | |
| | Mowha... ... ... ... | 985 | 0 | 0 | 985 | 0 | 0 | |
| | Kutha ... ... ... ... | 476 | 0 | 0 | 476 | 0 | 0 | |
| | Lac ... ... ... ... | 200 | 0 | 0 | 200 | 0 | 0 | |
| | Toon flowers ... ... ... | 27 | 0 | 0 | 27 | 0 | 0 | |
| | Old timber ... ... ... | 2,656 | 11 | 0 | 2,656 | 11 | 0 | |
| | | 20,698 | 11 | 0 | 20,698 | 11 | 0 | |
| | Total of 3 years ... | 53,976 | 2 | 8 | 53,976 | 2 | 8 | |

Zillah Baraitch;
*The 20th January*, 1865.

J. G. ANDERSON,
*Deputy Commissioner.*